

# Claims

[c1] What is claimed is:

1. An organic light emitting diode (OLED) display comprising:

a substrate, a plurality of pixel areas being defined on the substrate;

a heating circuit structure comprising:

a first conductive line and a second conductive line not connected to each other formed on the substrate;

a first isolation layer formed on the substrate, the first isolation layer comprising a plurality of first contact holes exposing the first conductive line and the second conductive line;

a plurality of first heating wires and a plurality of second heating wires disposed on the substrate, each of the first heating wires and each of the second heating wires being electrically connected to the first conductive line and the second conductive line respectively through each of the first contact holes and covering portions of each of the pixel areas; and

a ground electrode being electrically connected to each of the first heating wires and each of the second heating wires; and

a plurality of organic light emitting diodes corresponding to each of the pixel areas.

- [c2] 2. The display of claim 1 wherein both the first heating wire and the second heating wire are transparent heating wires.
- [c3] 3. The display of claim 1 further comprising a second isolation layer covering the heating circuit structure, and each of the organic light emitting diodes is disposed on the second isolation layer.
- [c4] 4. The display of claim 3 wherein each of the first heating wires is used to heat the corresponding organic light emitting diodes to allow the organic light emitting diodes above each of the first heating wires to emit green light, and each of the second heating wires is used to heat the corresponding organic light emitting diodes to allow the organic light emitting diodes above each of the second heating wires to emit red light.
- [c5] 5. The display of claim 4 wherein each of the organic light emitting diodes which are not heated emits blue light.
- [c6] 6. The display of claim 1 wherein the organic light emitting diodes are disposed underneath the first isolation layer.

- [c7] 7. The display of claim 6 wherein each of the first heating wires is used to heat the corresponding organic light emitting diodes to allow the organic light emitting diodes underneath each of the first heating wires to emit green light, and each of the second heating wires is used to heat the corresponding organic light emitting diodes to allow the organic light emitting diodes underneath each of the second heating wires to emit red light.
- [c8] 8. The display of claim 7 wherein each of the organic light emitting diodes which are not heated emits blue light.
- [c9] 9. The display of claim 1 wherein each organic light emitting diode comprises:  
a transparent electrode, the transparent electrode is used as an anode;  
an organic thin film formed on the transparent electrode;  
and  
a metal layer formed on the organic thin film, the metal layer is used as a cathode.
- [c10] 10. The display of claim 1 wherein the ground electrode is a transparent ground electrode, wherein a width of the ground electrode is greater than widths of the first conductive line and the second conductive line.

- [c11] 11. An organic light emitting diode (OLED) display comprising:
- a substrate, a plurality of pixel areas being defined on the substrate, a diode region and a thin film transistor (TFT) region being defined in each of the pixel areas;
  - a plurality of first heating wires and a plurality of second heating wires disposed on the substrate, each of the first heating wires and each of the second heating wires covering portions of each of the pixel areas;
  - a thin film transistor disposed on each of the heating wires in each of the thin film transistor regions;
  - an isolation layer formed on the substrate, and the isolation layer covering each of the thin film transistors and each of the heating wires; and
  - an organic light emitting diode disposed on the isolation layer in each of the diode regions;
- wherein each of the first heating wires is electrically connected to the first conductive wire to heat the corresponding organic light emitting diodes to emit green light, and each of the second heating wires is electrically connected to the second conductive wire to heat the corresponding organic light emitting diodes to emit red light.
- [c12] 12. The display of claim 11 wherein both the first heating wire and the second heating wire are transparent

heating wires.

- [c13] 13. The display of claim 11 wherein each of the organic light emitting diodes which are not heated emits blue light.
- [c14] 14. The display of claim 11 wherein a buffer layer is included between each of the thin film transistors and each of the heating wires, and the buffer layer is composed of silicon oxide.
- [c15] 15. The display of claim 11 wherein the isolation layer is composed of silicon oxide, and a thickness of the isolation layer is approximately equal to 1000 angstroms (Å).
- [c16] 16. The display of claim 11 wherein each organic light emitting diode comprises:
  - a transparent electrode formed on the isolation layer, the transparent electrode is used as an anode;
  - an organic thin film formed on the transparent electrode;
  - and
  - a metal layer formed on the organic thin film, the metal layer is used as a cathode.
- [c17] 17. The display of claim 16 wherein the transparent electrode is a pixel electrode of the thin film transistor.
- [c18] 18. The display of claim 11 wherein the first conductive

line and the second conductive line are not connected to each other.

[c19] 19. The display of claim 11 further comprising a ground electrode electrically connected to each of the first heating wires and each of the second heating wires.

[c20] 20. The display of claim 19 wherein the ground electrode is a transparent ground electrode, wherein a width of the ground electrode is greater than widths of the first conductive line and the second conductive line.

[c21] 21. An organic light emitting diode (OLED) display comprising:  
a substrate;  
a plurality of pixel areas being defined on the substrate;  
a plurality of organic light emitting diodes, each of the organic light emitting diodes corresponding to each of the pixel areas designed to emit a light beam of a predetermined color when unheated; and  
a heating circuit for heating selected organic light emitting diodes so as to enable the selected light emitting diodes to emit light beams of a color different from the predetermined color.